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**REMARKS**

Claims 1-20 are in the case. Claims 1-2, 6, and 11-12 are rejected under 35 USC § 102 over USPN 6,701,259 to Dor et al. Claims 3-5 are rejected under 35 USC § 103 over Dor et al. in view of USPN 5,502,306 to Meisburger et al. Claims 7-10 and 13-16 are rejected under 35 USC § 103 over Dor et al. in view of USPN 6,167,150 to Michael et al. Claims 17 and 19 are rejected under 35 USC § 103 over Dor et al. in view of USAN 2002/0035435 to Ninomiya et al. Claim 18 is rejected under 35 USC § 103 over Dor et al. in view of Ninomiya et al. and further in view of Michael et al. The rejections are respectfully traversed.

Claims 1, 11, and 17 have been amended and claims 13-16 and 18 have been canceled. No new matter has been added by the amendments, which are supported by the specification, such as in paragraphs 20-22, and the figures, which show the identifiable patterns of extended objects. Reconsideration and allowance of the claims are respectfully requested.

**CLAIM REJECTIONS UNDER §102**

Claims 1-2, 6, and 11-12 are rejected over Dor et al. Independent claim 1 claims, *inter alia*, a method for analyzing defects on a substrate by inspecting the substrate to detect the *defects*, identifying the defects by *location*, analyzing the defects to detect *extended objects*, and analyzing *sets* of the extended objects for an identifiable *pattern of repetition* across the substrate.

Dor et al. do not describe such a process, in that Dor et al. do not look for an identifiable pattern of extended objects across a substrate. Dor et al. have a selectable mode to perform calculations to identify clusters of defects and spatial signature analysis on the substrate. However, Dor et al. do not at any point describe analyzing sets of the extended objects for an identifiable pattern of repetition. This claimed step is completely omitted from the method of Dor et al. Therefore, Dor et al. is deficient, and claim 1 is patentable over Dor et al. Claims 2 and 6 depend from independent claim 1, and contain additional important aspects of the invention. Reconsideration and allowance of claims 1-2 and 6 are respectfully requested.

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Claim 11 claims, *inter alia*, a method for analyzing defects on a semiconductor substrate, by optically inspecting the substrate to detect the *defects*, identifying the defects by *location*, analyzing the defects to detect *extended objects*, and analyzing *sets* of the extended objects for an identifiable *pattern of repetition* across the substrate.

The deficiencies of Dor et al. in regard to this combination of elements are described above. Thus, claim 11 patentably defines over Dor et al. Reconsideration and allowance of claim 11 are respectfully requested. Dependent claim 12 depends from independent claim 11, and contains additional important aspects of the invention. Therefore, dependent claim 12 patentably defines over Dor et al. Reconsideration and allowance of dependent claim 12 are respectfully requested.

### CLAIM REJECTIONS UNDER §103

Claims 3-5 are rejected under 35 USC § 103 over Dor et al. in view of Meisburger et al. Dependent claims 3-5 depend from independent claim 1, and therefore claim *inter alia*, a method for analyzing defects on a substrate by inspecting the substrate to detect the *defects*, identifying the defects by *location*, analyzing the defects to detect *extended objects*, and analyzing *sets* of the extended objects for an identifiable *pattern of repetition* across the substrate.

The deficiencies of Dor et al. in regard to this combination of elements are described at length above. Meisburger et al. do not compensate for the deficiencies of Dor et al., in that Meisburger et al. also do not look for an identifiable pattern of extended objects across a substrate. Thus, claims 3-5 patentably define over Dor et al. in view of Meisburger et al. Reconsideration and allowance of claims 3-5 are respectfully requested.

Claims 7-10 and 13-16 are rejected under 35 USC § 103 over Dor et al. in view of Michael et al. Dependent claims 7-10 depend from independent claim 1, and therefore claim *inter alia*, a method for analyzing defects on a substrate by inspecting the substrate to detect the *defects*, identifying the defects by *location*, analyzing the defects to detect *extended objects*, and analyzing *sets* of the extended objects for an identifiable *pattern of repetition* across the substrate.

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The deficiencies of Dor et al. in regard to this combination of elements are described at length above. Michael et al. do not compensate for the deficiencies of Dor et al., in that Michael et al. also do not look for an identifiable pattern of extended objects across a substrate. Michael et al. describe a "bounding box," but the term is again used in a different context from that as used in the present claims and described in the present application. Michael et al. describe using a "bounding box" to determine the edge of an object of interest, and if there are other objects adjacent the edge of the bounding box of the object of interest, then it is classified as a defect. However, no extended objects are found within the defects, as recited by the present claims, and no identifiable pattern of extended objects across a substrate is looked for. Thus, claims 7-10 patentably define over Dor et al. in view of Michael et al. Reconsideration and allowance of claims 7-10 are respectfully requested.

Dependent claims 13-16 have been canceled.

Claims 17 and 19-20 are rejected over Dor et al. in view of Ninomiya et al. Claim 17 claims, *inter alia*, an apparatus for analyzing defects on a substrate, with a sensor for inspecting the substrate, a stage for providing relative movement, and a controller for correlating *defect information* and *position information*, analyzing the correlated defect information and position information to detect *extended objects*, and analyzing *sets* of the extended objects for an identifiable *pattern of repetition* across the substrate.

The deficiencies of Dor et al. in regard to this combination of elements are described above. Ninomiya et al. do not compensate for the deficiencies of Dor et al., in that Ninomiya et al. do not look for an identifiable pattern of extended objects across a substrate.

Thus, claim 17 patentably defines over Dor et al. in view of Ninomiya et al. Reconsideration and allowance of claim 17 are respectfully requested. Dependent claims 19-20 depend from independent claim 17, and contain additional important aspects of the invention. Therefore, dependent claims 19-20 patentably define over Dor et al. in view of Ninomiya et al. Reconsideration and allowance of dependent claims 19-20 are respectfully requested.

Claim 18 is rejected over Dor et al. in view of Ninomiya et al. and further in view of Michael et al. Dependent claim 18 has been canceled.

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**COMBINATION OF REFERENCES**

Applicants renew their assertion that the office action cites references in which certain key words have been found, which key words are similar to the words that are used in the claims of the present application, but these key words do not in all cases even match the concepts that are expressed in the present claims. Further, there is no permissible incentive to make the combinations of the cited references in the manner expressed in the office action. However, even if such a combination could be permissibly made, the present invention as claimed is still not made obvious by the cited combination, because the concepts of the matched key words do not align with the concepts expressed in the claims.

**CONCLUSION**

Applicants assert that the claims of the present application patentably define over the prior art made of record and not relied upon for the same reasons as given above. Applicants respectfully submit that a full and complete response to the office action is provided herein, and that the application is now fully in condition for allowance. Action in accordance therewith is respectfully requested.

In the event this response is not timely filed, applicants hereby petition for the appropriate extension of time and request that the fee for the extension be charged to deposit account 12-2355. If other fees are required by this amendment, such as fees for additional claims, such fees may be charged to deposit account 12-2252. Should the examiner require further clarification of the invention, it is requested that s/he contact the undersigned before issuing the next office action.

Sincerely,

LUEDEKA, NEELY &amp; GRAHAM, P.C.

By: 

Rick Barnes, 39,596

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